



**INTERNATIONAL ELECTROTECHNICAL COMMISSION SCHEME FOR CERTIFICATION TO  
STANDARDS FOR EXPLOSIVE ATMOSPHERES (IECEx SCHEME)**

**Ex Management Committee, ExMC**

**TITLE: IECEx Assessment Report for acceptance of "KEMA Quality BV" as an IECEx Test  
Laboratory**

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This document contains the IECEx Assessment Report for the acceptance of "KEMA Quality BV" of The Netherlands as an IECEx Test Laboratory (ExTL) within the IECEx Scheme.

**The report is hereby submitted for voting**

Please consider the assessment report and return the completed voting form to the Secretariat by **2005 03 10**. Your speedy response to the voting process will be very much appreciated.

You may return your completed voting form (available in Word format) via fax or e-mail. Details below.

**Address:**  
IECEx Secretariat  
SAI Building  
286 Sussex Street  
Sydney 2000  
Australia

**Tel: +61 2 8206 6940**  
**Fax: +61 2 8206 6272**  
**Email: [chris.agius@iecex.com](mailto:chris.agius@iecex.com)**  
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## Voting Form

IECEX Assessment Report for acceptance of the following candidate as an  
Ex Testing Laboratory

“KEMA Quality BV”

- Yes. I agree with the acceptance of **“KEMA Quality BV”** as an  
Ex Test Laboratory
- No. I do not agree with the acceptance of **“KEMA Quality BV”** as an  
Ex Test Laboratory within the IECEX Scheme, for the following reasons

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Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Member Body: \_\_\_\_\_

Date: \_\_\_\_\_

Please complete and return by **2005 03 10** to:

Mr Chris Agius  
IECEX Secretariat

Contact Details:  
*E-mail: [chris.agius@iecex.com](mailto:chris.agius@iecex.com)*  
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## IECEX ASSESSMENT REPORT FORM (TEST LABORATORY – ExTL)

### Type of Assessment:

Initial Assessment for Candidate ExTL   
~~Surveillance Assessment for existing ExTL~~

### 1. OBJECT AND FIELD OF APPLICATION

- 1.1 *Country:*  
The Netherlands
- 1.2 *Name of Candidate TL*  
KEMA Quality BV
- 1.3 *Members Of The Assessment Team*  
Mr C. Agius  
Mr W. Dunn  
Mr V. Varma
- 1.4 *Place And Date Of Assessment*  
Utrechtseweg 310  
6812 AR Arnhem, The Netherlands
- MTSA  
Arnhem, The Netheralnds

#### Site Assessors:

Mr C. Agius- Lead Assessor  
Mr V. Varma

Following a review of all documentation submitted, a site assessment was conducted on 9, 10 and 11 November 2004. The site assessment was conducted by two assessment team members and included both the KEMA Quality BV and MTSA sites. The site visit included a review and successful completion of the IECEX Technical Guidance Documents (TGDs), now retained on file by the IECEX Secretariat. During the first visit some issues were raised largely concerning documentation and procedures with improvements made by KEMA. These were reviewed at a follow up visit on 6 and 7 December 2004. The results of the follow up visit were most positive with the IECEX assessment now satisfied that all requirements have now been met.

#### 1.5 *Assessment References*

##### Document:

- i) IECEX 02 Second Edition
- ii) IECEX Operational Document OD/003
- iii) ISO/IEC 17025
- iv) IECEX Technical Guidance Documents
- v) ExTL application documents

**1.6 Scope Of Application**

During the on-site visit the scope of application was confirmed to align with the scope of application as follows:

<b>Product Category</b>	<b>Standard</b>
General Requirements	IEC 60079-0
Flameproof Enclosures	IEC 60079-1
Pressurised Enclosures	IEC 60079-2
Powder Filling	IEC 60079-5
Oil Immersion	IEC 60079-6
Increased Safety	IEC 60079-7
Intrinsic Safety	IEC 60079-11
Non-Sparking	IEC 60079-15
Encapsulation	IEC 60079-18
Dust Protected by Enclosure	IEC 61241 series

**1.7 Candidate TL Persons Interviewed**

During the course of both the initial and follow up site visits, to both the KEMA Quality BV and MTSA, sites most of the Hazloc and related personnel were interviewed. The following are examples of the management and staff interviewed during the assessment.

<b>Name</b>	<b>Position</b>
<b>Mr Theo Pijpker</b>	<b>Technical Manager Hazardous Locations</b>
<b>Mr Bert Vries</b>	<b>Certification Manager</b>
<b>Mr Kees van Es</b>	<b>Project Manger</b>
<b>Mr Eric Hennekes</b>	<b>Technical Engineer</b>
<b>Mr Bart Meijer</b>	<b>Project Manager</b>
<b>Mr Kees Stroo</b>	<b>Trainee</b>
<b>Mr Harry de Wild</b>	<b>Project Manager</b>
<b>Mr Erwin ter Haar</b>	<b>Project Manager</b>
<b>Mr John Thijsen</b>	<b>Technical Engineer</b>
<b>Mr Dirk Jan Schreurs</b>	<b>Technical Engineer</b>

**1.8 Legal Entity Of The Candidate TL**

KEMA Quality BV is a limited liability Company organised under the laws of the Netherlands. The legal documentation was verified during the site assessment visit.

**1.9 Associated ExCB**

<b>Names of Laboratories</b>	<b>Address</b>
KEMA Quality BV has an integral ExCB	As above

While the ExTL is integral with the Certification Body, the assessment team are satisfied that the quality management system and operational procedures provide sufficient separation of the testing and certification functions.

### 1.12 *Financial Support*

KEMA Quality BV derives its funding from the charges for its services. As part of the assessment the Assessment Team confirmed that there are sufficient financial resources for KEMA Quality BV to meet its obligations.

### 1.13 *History*

N.V. KEMA was founded in 1927 as the Dutch electricity industry's test house. KEMA Quality BV is a business unit of the N.V. KEMA, with testing and certification of household, commercial and industrial products and components as its core business. In the 1960's KEMA already tested and certified Ex-products for national use. Since 1991 KEMA Quality B.V. as an Ex Notified Body assesses and certifies Ex-products according to the European Directives

### 1.14 *Relevant Standards*

KEMA Quality BV operates within the European CENELEC system and as such declares compliance with the declared European Group differences and standards listed in the IECEX Bulletin..

## 2. ORGANISATION

### 2.1 Names, Titles And Experience Of The Senior Executives

Name	Title	Experience
Mr Erik Duim	Managing Director	5 years
Mr Martin Van der Dussen	Vice President	17 years
Mr Mark Hikspoors	Manager Team Industrial	9 years
Mr Arhtur van der Meijden	Operational Manager Team Industrial	10 years
Mr Theo Pijpker	Technical Manager Ex-group	15 years

### 2.2 Name, Title And Experience Of The Quality Management Representative

Name	Title	Experience
Mr Jan Spee	Quality Manager	26 years at KEMA

### 2.3 Name And Title Of Nominated Principal Contact

Name	Title
Mr Theo Pijpker	Technical Manager, Hazardous Locations
Mr Bert Vries	Certification Manager

### 2.4 Employees

#### 2.4.1 Total Numbers

Total number in Test Laboratory: 305

### 2.5 Organisational Structure

Total number involved in Ex assessment and testing: 19 (Ex project managers + auditors + engineers). Refer to Annex A of ExMC/220/DV for the organisational chart.

### 3. RESOURCES

Total number of KEMA staff involved in the Hazloc Group is 19

**KEMA Quality BV** have an extensive range of facilities for testing and assessment of Ex equipment to cover the scope of their application. This includes separate Ex d flameproof test facilities and areas to ensure a full and thorough test and assessment can be conducted.

Resources include a compliment of very well trained and professional staff with an effective competency training and skills matrix system to ensure that competent engineering staff are utilised for each project.

During the on-site assessments the team confirmed the availability of equipment and facilities, as defined by the IECEx Technical Guidance Documents, to conduct testing and assessment for the scope of work recommended for acceptance by the Assessment Team. This assessment included verification of the necessary test facilities and equipment as well as test and calibration procedures.

### 4. TEST METHODS

#### 4.1 Procedures

A comprehensive range of Test procedures exist as part of the KEMA PLC documented management system, e.g. PROD-P-Ex04 provides an overview of the Ex assessment and Certification process with reference to the relevant procedures, including reference to ExTAG Decision sheets.

These were reviewed in detail during the assessment visits and following improvements to the documentation are now found to full address the requirements of the IECEx Scheme.

#### 4.2 Staff Work Instructions

Same as for 4.1 above

### 5. TEST REPORTS AND RECORDS

#### 5.1 Test Reports Issued

Period: September 2002 to July 2004

Type of protection	Number of test reports
d	234
e	216
i	267
o	2
p	23
q	6
n	46
m	66
Dust protection	196

Based on above test reports, in total 608 certificates were issued.

#### 5.2 Test Records

Test reports along with all other certification records are retained for a minimum of 10 years.

## 6. CALIBRATION

As part of the Quality Management System, a sound and robust system of calibration is maintained. Calibration is conducted, internally for some instruments and externally by accredited calibration facilities. KEMA Quality BV testing procedures also provide for a system of clear traceability of measurements between test apparatus and job.

All KEMA measuring instruments used are calibrated by KEMA Quality's calibration laboratory (CAL department of KEMA Quality B.V.), which has its own accreditation under RvA. Traceability of instruments used is assured by KEMA's instrument logging system Logic LTI.

## 7. DOCUMENTATION

### 7.1 *Quality Manual*

KEMA Quality BV operates a very sound and comprehensive Quality system across all their operations. This system operates on a centralised system known as the PLC system which provides for full access to quality documentation and procedures by all staff.

During the assessment site visit on 9, 10 and 11 November 2004, the IECEX assessment team raised that it was not clear how IECEX operational documents and ExTAG Decisions Sheets were captured by the Quality system. KEMA have since amended their documentation and procedures to now formally include all IECEX operational documentation. Changes made to PROD-P-Ex04 are examples of where this change have been made.

These changes were reviewed by the Assessment Team both via document review and during a follow up visit on 6 and 7 December 2004 for which the IECEX assessment Team now concludes that all issues raised have been fully dealt with.

### 7.2 *Document Change Control*

The Document Management and Control system was found to be robust and very sound reflecting a mature and well controlled system. Procedures exist for dealing with control of documents and were reviewed by the assessment team and found to comply with the requirements of ISO/IEC 17025 and Guide 65.

## 8. CONFIDENTIALITY

As part of the Quality Management System, KEMA ensure that all employees and any contractors sign a confidentiality agreement with these agreements maintained as part of the Record Management system. The Assessment sighted the location of these record of confidentiality agreements and sighted various examples..

## 9. NATIONAL ACCREDITATION

KEMA Quality BV hold current accreditation to ISO/IEC 17025 by the Dutch Accreditation Council and also are approved as a Notified Body for Directive 94/9/EC by (as listed on <http://europa.eu.int/comm/enterprise/atex/nb/nblast.htm>).

Ministry of Labour of Japan: as Overseas Inspection Authority.

United States Coast Guard: as Accepted Independent Laboratory (as listed on <http://www.uscg.mil/hq/g-m/mse/lablist/lab1111105.pdf>).

## 10. RECOGNITION AND AGREEMENTS

KEMA Quality BV hold many agreements with other Test bodies and accreditations including:

- CSA, Canada
- FM, USA
- An accepted Testing Laboratory for the IECEE CB Scheme
- Appointed under the ATEX Directive
- Many others

In addition, KEMA Quality BV also operate in many areas other than Ex and have gained international recognition in these areas.

## 11. INTERNAL AUDIT AND PERIODIC REVIEW

The IECEX Assessment Team found that KEMA Quality BV operate a very formal internal auditing system with records of previous internal audits all available with scheduled audits conducted in a timely manner as they fall due.

The Assessment Team did however review the training the competency of personnel appointed as KEMA Internal Auditors and found that while there appeared to be a very high level of skills in the application and auditing of quality management systems, the assessment team raised a concern over the level of Ex knowledge required for internal audits of the Ex department. Since then KEMA Quality BV have amended their procedures to require internal audit teams to have at least one person with some Ex knowledge while maintaining the independence required to conduct an effective internal audit. The amended procedures were sighted by the Assessment Team.

## 12. COMPLAINTS MECHANISM

The Complaints system is captured as part of the KEMA Quality BV quality system and was reviewed by the assessment team whom conclude that the system is both formal and effective. Complaints of a verbal nature are also covered.

## 13. SPECIAL FACTS TO BE NOTED

Given that KEMA is a large organisation, the assessment team were mindful of the need to ensure that adequate controls are in place that ensure that the Ex Department has the management support to operate in accordance with the IECEX Rules and Operational Procedures (ODs). From the commencement of the assessment during and at the conclusion the IECEX assessment Team found a total commitment from all levels of management and staff, noting that the Chief Executive made himself available for the closing meeting



## 14. COMMENTS

In accordance with the IECEx Assessment procedures, IECEx Technical Guidance Documents were satisfactorily compiled.

The IECEx Assessment Team would wish to commend the KEMA Quality BV, especially their Ex Department for the professionalism and speedy responses to requests by the Team along with their diligence in addressing all issues raised from the first assessment visit on 9, 10, 11 November 04 which enabled the follow up visit of 6 + 7 December 04 to be successful in completing the IECEx assessment program .

## 15. RECOMMENDATION

In similar fashion to the ExCB application, (re ExMC/220/DV), the Assessment Team recommends full acceptance of KEMA Quality B.V. as an IECEx Test Laboratory (ExTL) for the following Ex areas:-

- General Requirements
- Ex d
- Ex p
- Ex q
- Ex o
- Ex e
- Ex i
- Ex n
- Ex m
- Dust protected by enclosures

## LIST OF ANNEXES

*Refer to ExMC/220/DV, Annex A for the KEMA Ex Organisation Chart*

A- Examples of Ex Test Facilities

Mr C Agius  
Team Leader

Mr V Varma

Mr W Dunn

## Annex A

### Examples of KEMA Ex Test Facilities



